EDUCATION COMMITTEE OF THE SOCIETY OF ACTUARIES (SOA)

INTRODUCTORY STUDY NOTE

EXAM SESSION: **SPRING 2014**

EXAM: **MLC—MODELS FOR LIFE CONTINGENCIES**

DATE and TIME:

The examination will consist of four hours of multiple choice and written answer questions. A 15 minute read-through time will be given prior to the start of the exam. No writing is allowed during the read-through time. Candidates are strongly advised to avoid even holding writing instruments during this period.

1. The exam will have 96 points. Each multiple-choice question will be worth 2 points. There are expected to be 20 multiple-choice questions (and if so, there will be 56 points for written-answer questions), but as the exam is developed, the committee may determine that the exam's objectives are better met with slightly more or fewer multiple-choice questions. The number of written-answer questions may vary from exam to exam. Candidates are free to allocate their time between the written-answer and multiple-choice questions as they choose. The point values assigned to each question are set to be proportional to the examination committee's estimate of the time required (approximately 2.5 minutes per point). It is expected that multiple choice questions will be more straight-forward and thus require less time per question than in past exams that were entirely multiple choice.

    The ranges of weights shown on the syllabus are intended to apply to the large majority of exams administered. On occasion, the weights of topics on an individual exam may fall outside the published range.

    The new structure of this examination will use a unique grading process. Only candidates with scores above a certain threshold on the multiple-choice portion of the exam will have their written-answer portion graded. For those papers that are fully graded, passing will depend only on the total score.

2. Recommended material to master the Learning Outcomes includes textbooks, sample questions, and any study notes listed in the Appendix of this note. The Appendix may contain additional important information regarding this exam. The Learning Outcomes are found via links in this exam's home page on the SOA Web site. The link to the sample questions is in the Appendix to this note.

3. Knowledge and understanding of life contingency concepts are significantly enhanced through working out problems based on those concepts, including textbook problems and other sources of sample problems.

4. Tables are provided in a link in the Appendix for the candidate and will be provided to the candidate at the examination. These include a table of values for the standard normal distribution and illustrative life tables. Because the tables for Exam MLC will be provided to the

candidate at the examination, candidates will not be allowed to bring copies of the tables into the examination room.

5. Several book distributors carry some or all of the textbooks for the Society of Actuaries exams. A list appears on the SOA Web site at: http://www.soa.org/education/exam-req/resources/edu-txt-manuals.aspx.

6. Any changes in the syllabus for this exam will be published under "Updates" in this exam's home page on the SOA Web site.

7. The candidate should master the Learning Outcomes. These Learning Outcomes, not the recommended text sections, comprise the syllabus and also guide the examination committee when writing questions. The Learning Objectives also set out the cognitive level needed to pass this exam. Note that candidates are expected to "interpret," "explain," "compare," "apply," "construct," etc. While studying the recommended text sections, candidates should refer back to the Learning Outcomes to remain focused on the goals of the exam.

8. The examination questions for this exam will be based on the notation and terminology described in the Notation and Terminology Study Note for this exam. If a conflict exists (in definitions, terminology, etc.) between this note and the readings for other exams, the questions should be answered on the basis of this note.

9. Candidates may ONLY use these battery or solar-powered Texas Instruments models: BA-35, BA II Plus*, BAII Plus Professional*, TI-30Xa, TI-30X II* (IIS solar or IIB battery), and TI-30X MultiView* (XS solar or XB battery). Candidates may use more than one of the approved calculators during the examination.

    Calculator instructions may not be brought into the exam room. During the exam, the calculator must be removed from its carrying case so the supervisor can confirm that it is an approved model. Candidates using a calculator other than the approved models will have their exams disqualified.

    Candidates can purchase calculators directly from: Texas Instruments, Attn: Order Entry, PO Box 650311, Mail Station 3962, Dallas, TX 75265, phone 800/842-2737 or http://epsstore.ti.com.

    *The memory of the **BA II Plus, BAII Plus Professional, TI-30X II,** and **TI-30X MultiView** calculators will need to be cleared by the examination supervisor upon the candidate's entrance to the examination room.*

10. A list of various seminars/workshops and study manuals appears on the SOA Web site at: http://www.soa.org/education/exam-req/resources/edu-sem-workshops.aspx and http://www.soa.org/education/exam-req/resources/edu-txt-manuals.aspx.

    These seminars/workshops and study manuals do not reflect any official interpretation, opinion, or endorsement of the Society of Actuaries or its Education Committee.

11. The Society of Actuaries provides study notes to persons preparing for this examination. They are intended to acquaint candidates with some of the theoretical and practical considerations involved in the various subjects. While varying opinions are presented where appropriate, limits on the length of the material and other considerations sometimes prevent the inclusion of all possible opinions. These study notes do not, however, represent any official opinion, interpretation or endorsement of the Society of Actuaries. The Society is grateful to the authors for their contributions in preparing study notes.

The American Academy of Actuaries, the Canadian Institute of Actuaries, the Conference of Consulting Actuaries, and the Society of Actuaries jointly sponsor various examinations administered by the Society of Actuaries.

APPENDIX

There is one study note for this examination:

Notation and Terminology used on Exam MLC

Recommended Textbook

Dickson, C.M.D., Hardy, M.R., and Waters, H.R. (2013), *Actuarial Mathematics for Life Contingent Risks*, Second Edition, Cambridge: Cambridge University Press, Chapters 1 – 13, excluding 10.7 and 11.5

Other Resources

All released exam papers, since 2000 can be found here.

Exam MLC Tables

Exam MLC Sample Multiple-Choice Questions

Exam MLC Sample Multiple-Choice Solutions

Exam MLC Sample Written-Answer Questions and Solutions - April 25, 2014